

# **GHIS 20100828 Report**

Submitted by **laurel** on Wed, 09/01/2010 - 14:59

- **GHIS**
- **Frank**

Flight Date:

Saturday, August 28, 2010

Sortie Number:

GH001

## GHIS Flight Summary

Mission: GRIP

Location: Dryden Flight Research Center, Edwards AFB, CA

Laurel Watts

Date: 20100828

Sortie: GH001

Flight Objectives: Hurricane Frank flight without the dropsonde instrument.

Notes: GHIS operated well the entire flight.

The Global Hawk vertical acceleration experienced during the flight was in the range of 0.29 to 1.81 g, always in the acceptable range. The highest values experienced were for takeoff, landing and when the altitude, pitch or roll was changed suddenly.

The Measured valued for the 1-second averaged vertical acceleration in g are attached as five graphs. In the first graph, the Vertical g and the Static pressure are plotted for the entire 15-hour flight. The time is in UT seconds since midnight on the day of the flight. The second plot on this page show the correlation of pitch and roll with the aircraft g reading. On the next page, the takeoff and landing portions of the flight have been expanded. Short, abrupt changes in altitude lead to greater g's than the steady takeoff at the beginning or the gradual decent at landing. On the final page, the average vertical acceleration is displayed along with the maximum, minimum and static pressure. Points of interest in the flight are when the aircraft leaves the continent (the aircraft has a smoother ride), and when it is over hurricane Frank. Time over the hurricane was generally rougher than over the ocean on the way. Localized notches are seen when the aircraft made the square maneuvers and when it turned around.

Data to be submitted: UTC, Accel\_g

UTC is seconds since midnight of the start flight date, UTC

Accel\_g is the 1-second average of 10-Hz vertical acceleration data from the 5-g vertical accelerometer.

Layout\_FlightVib.png

Layout\_FlightTL.png

FlightAccel.png

Status:

Green